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PHOTOS



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ENDURE & ENJOY



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Chris Froome, Nairo Quintana, and Alberto Contador power through a gale of driving rain and howling winds that knocked over the fencing during the climb to Plateau de Beille in stage 12 of the Tour de France, on July 16.

PHOTO BY IRI GRECO/BRAKETHROUGH MEDIA

Canon 1Dx; 24-70mm f/2.8 lens; 1/2000 sec. at f/2.8; ISO 400

GRECO: "This day had devolved into hail, wind, and a driving, freezing rain. I found this straightaway where the mountains hugged the distance. It was as clean a moment as I could have imagined as the race favorites rode head-on into the tempest with nothing to distract them from the conditions."

ON THIS PAGE:

Through farm fields and over ancient granite blocks, the peloton makes the right turn at sector 25, Quiévy (at 108km for 3,700 meters), one of the most popular spectator spots on the Paris-Roubaix course.

PHOTO BY JIM FRYER/BRAKETHROUGH MEDIA

Canon 1Dx; 24-70mm f/2.8 lens; 1/1000 sec. at f/2.8; ISO 125

FRYER: "I shoot this corner opposite all the photographers. My draw here is how it shows the scale of the race, the depth of fans, multiple elevations, and the feeling of an endless sector of cobbles. I stood on my moto to gain a bit more of an overhead point of view."



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FEW ATHLETIC PURSUITS lend themselves to photography as well as cycling. I say that because I love our sport but also because it's true.

Sure, there's no shortage of iconic imagery from other sports. In terms of legendary photos, it would be difficult to top Muhammad Ali standing over Sonny Liston, or Brandi Chastain's World Cup sports-bra moment. They are triumph personified and made iconic.

But for all the six-hour stages, high-speed action, and long mountain slogs, cycling can regularly be distilled down to singular, all-encompassing moments—flashes of physical suffering, emotional turmoil, and competitive drama that define the winners and losers. That those moments involve colorful kits and high-tech engineering set against some of the world's most dramatic landscapes elevates cycling photography to a higher plane.

The cycling version of the Ali-Liston photo swaps boxing trunks for a bright team jersey, the prone Liston for a muddy rider falling off the back, the boxing ring for the Champs-Élysées or the summit of the Col du Galibier. Is there anything you need to know about the 1949 Tour de France that isn't captured in that shot of Coppi leading Bartali over the Alps in stage 17? Likewise, this year's elite men's world championship race is all in Tim De Waele's shot of Peter Sagan looking over his shoulder on the finishing straight. (page 52)

It should come as no surprise that most of my favorite photos of myself involve bikes. As a cycling journalist, I've had the privilege of being photographed at bike events around the world. But there are plenty of images of me riding with friends at home that I'll carry with me forever.

I think a lot of this has to do with the intimacy and accessibility at the core of competitive cycling. There will never be a photo of me launching for a dunk from the free-throw line like Michael Jordan or pulling in a touchdown pass like Dwight Clark. But while I can't climb a mountain as quickly or gracefully as Nairo Quintana, I can ride those same roads, on equipment that is at least similar to his, and, for a moment (hopefully captured on someone's iPhone and posted on Instagram), look like an athlete.

In my face, you'll see the ride—a smile if it's been a fast one, a grimace if I've been struggling, lines if I've been riding enough that season to get down to race weight.

When it comes to cycling, a photo is worth a thousand kilometers.

— JOHN BRADLEY



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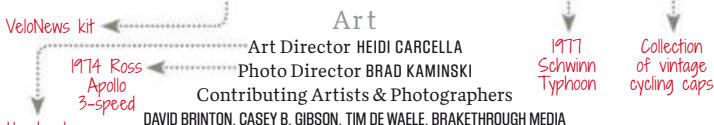


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Race to the bottom

A new group challenges USA Cycling's hold on grassroots racing BY CALEY FRETZ



ALEX MONTOYA ORGANIZES bike races for a living. They're small events that look a whole lot like most people's first race—a few hundred locals lining up on a weeknight, points or prestige taking a backseat to the thrill of a start gun and the joy of post-race stories.

Montoya, 25, put on 40 of these races in 2015, trying to earn with volume what he can't from margins. Daily USA Cycling permits range from \$100 to \$700, depending on race size, and insurance costs \$3.60 per person. Montoya's entry fees are just \$20. Shrink the margins and he suffers. Shrink them too much and the races die. There's no way around it. And though Montoya promotes races only within his home state of Texas, his challenges are familiar to promoters across the country: how to keep racing fun and

affordable in the face of escalating costs.

Could the answer be abandoning USA Cycling altogether?

Upstart sanctioning body North American Cycle Sport (NACS) arrived in October as a direct competitor to USA Cycling, at least at the level where Montoya operates. The organization promises lower permit and insurance costs for promoters, cheaper memberships for riders, better revenue for the United States' 34 local associations, and a grassroots-first approach. It wants to do this part of USA Cycling's job, but better and cheaper.

USA Cycling is fighting a two-front battle for its future. The first is internal, as it seeks to get rid of the ghosts—and bodies—that remain from the Lance Armstrong era. The second is

external, as local organizers and weekend racers look to take back grassroots control. That's where NACS comes in.

"We were almost at a tipping point in terms of where the sport is going," says Tod Manning, CEO of the new organization and, tellingly, a longtime USA Cycling official who recently officiated from a motorcycle at the Richmond world championships. "We don't want to lose more events—not just lose events sanctioned by USAC, but lose events forever."

NACS exists to support domestic racing. Though Manning says he's not out to compete with USA Cycling, supporting domestic racing

“I’m of the opinion that you can accomplish more inside an organization than by setting up a new organization. Infiltrate the castle and fix it from within instead of standing outside throwing rocks at it.”

— JOE HOLMES, director of Redmond Derby Days

falls squarely under USA Cycling’s purview. But that’s only part of USAC’s mission. As the national governing body of an Olympic sport, it is also responsible for elite cycling, drug testing, events sanctioning, and managing national teams across multiple disciplines. The truth is that, especially recently, the organization has under-delivered on the amateur side of things.

From 2008 to 2014, USA Cycling’s revenue increased nearly 40 percent, to \$14,126,916, yet the money it returns to its 34 local associations that administer cycling at the regional level has remained relatively flat, at about \$430,000 annually. The number of USA Cycling races dropped in 2013 for the first time in a decade, from 3,138 to 3,105.

NACS has no aims on the elite end of things. The organization seeks only to offer an alternative for grassroots promoters and racers—different licenses, permits, and insurance. Still, those grassroots races account for roughly 20 percent of USA Cycling’s annual revenue. So NACS is a direct threat to that organization’s finances and public standing. It’s a competitor, whether intentional or not.

NACS hasn’t disclosed how many events it will sanction in its first year, though Manning is optimistic. “I have been overwhelmed by the response that we have received from across the United States from people who are looking to sanction not just one race but race series,” he says. “It’s stunning. We’re almost worried: ‘Are we ready for this much success?’ We’re almost worried, but we’re not.”

What would NACS success mean for racers and promoters?

It’s complicated. While it could lead to more races, it would also require racers to buy two licenses—one for USAC events and one for NACS—which actually makes things more expensive for them. To address that concern, NACS will offer a one-day license scheme that costs less than \$10, applies across racing categories, and is cumulative. Nine one-day licenses purchased in the same season would count as a full license that would cover the rest of the season. NACS also offers a five-race package for

\$35. USA Cycling offers one-day licenses as well, but only the first purchase counts toward a full license, and they are available only for the entry-level categories.

NACS’s lower permit and insurance prices could result in cheaper entry fees, better margins, and, perhaps, more races. Montoya’s back-of-the-napkin figuring suggests that NACS sanctioning would have saved him more than \$4,000 over the last two years, simply by cutting his insurance costs from \$3.60 per rider to \$1.10, as NACS has promised to do. “That could have been invested in juniors, in more races,” he says.

There’s also the question of whether the domestic scene could handle two competing sanctioning bodies, and what would happen to promoters stuck in the middle. Montoya and others contacted for this story expressed concern that a move to NACS might anger USA Cycling or members of its 34 local associations. NACS won’t even release names of people associated with its founding. “Unfortunately, these folks are worried about repercussions from either their local associations or from USA Cycling, and so they do not want their names released,” Manning says.

There are also plenty of promoters and cycling insiders who would prefer to see change come from within. Joe Holmes directs Washington’s Redmond Derby Days, the longest continuously running race in the country, at 75 years. (New Jersey’s Tour of Somerville lost a few years to World War II.) He’s also a coach who counts among his charges double junior world champion Chloe Dygert and, as such, has to work closely with USA Cycling. He sanctions his races through that body and will continue to do so.

“I’m of the opinion that you can accomplish more inside an organization than by setting up a new organization,” he says. “Infiltrate the castle and fix it from within instead of standing outside throwing rocks at it. I have a lot of respect for Tod, but I know I’ll always continue to permit races through USAC.”

One issue inherent in splintered sanctioning, Holmes says, is that it disrupts the national talent pipeline. Many races in the Pacific Northwest run under the jurisdiction of the Oregon Bicycle

Racing Association, or OBRA, an autonomous organization that has historically had little reciprocation and cooperation with USA Cycling—no USA Cycling money coming down, no race points from OBRA events counting nationally.

“You have a lot of kids falling through the cracks,” Holmes says. “USA Cycling selects kids for their development camps and programs largely through its own results and rankings, and these kids [from OBRA] aren’t on those results and rankings.”


New USA Cycling CEO Derek Bouchard-Hall has promised to improve cooperation with local organizations like OBRA and to refocus efforts on the grassroots. “These are good organizations doing good things,” he said during an interview at September’s UCI World Road Championships in Richmond. “There are some challenges associated with the fact that it’s separate, though. There are frictions if we don’t work in concert, in a collaborative way, which we haven’t. I’d like to address that.”

But OBRA, which covers only Oregon, is one thing. There is no guarantee that Bouchard-Hall would strike a deal with a national competitor. Manning knows the issue of results, points, and upgrades is a difficult one for both racers and promoters. “I would absolutely like a partnership,” he says.

At least from the outside looking in, USAC and NACS serve as classic examples of top-down and bottom-up approaches. The former seems to be using the halo of elite racing—the Olympics, the big American names racing in Europe—as a lure to bring more people into cycling. The latter is taking a more demand-side approach: Create more opportunities for people to race, and more people will race.

USA Cycling’s approach hasn’t served grassroots racing as well as it should have. The success of organizations like OBRA is evidence of that. So is the number of races that have shed sanctioning completely. A vast swath of high-level mountain bike racing—events like the Leadville Trail 100, the Big Mountain Enduro Series, the Breck Epic stage race—don’t require any sort of license. “Promoters can get better insurance privately and without the need for oversight from a top-heavy bureaucracy that’s proven time and again that it’s both self-serving and out of touch,” says Mike McCormack, who organizes Breck Epic. And, now, so is the rise of NACS, which could be the strongest test yet of USA Cycling’s willingness to adapt and of Bouchard-Hall’s ability to fight both internal and external threats.

NACS has its own challenges to overcome. It could very well collapse if racers find navigating dueling national federations to be more trouble than it’s worth, for example, or if not enough promoters are willing to make the jump.

Of course, it could also turn out to be precisely what grassroots racing needs. 

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Season of the wrench

As the days darken, it's the mechanics' time to shine By Ryan Newill



WHEN DENIS MENCHOV CRASHED and slid across rain-slicked cobbles in the time trial that closed the 2009 Giro d'Italia, his maglia rosa, scuffed and sodden, looked to be slipping away as well. But before the team car could come to a stop, Rabobank mechanic Vincent Hendricks was out the door, shoes skidding as he held onto the still-moving vehicle. He grabbed a spare bike from the roof, then pushed Menchov for 30 meters as he struggled to engage his left pedal. By all accounts, Hendricks saved the Russian's Giro. It was a rare shining moment for a road mechanic, a job that involves more routine labor in dark parking lots than heroic moments in the spotlight. It was also the first time Hendricks had changed a bike during a time trial.

For mechanics whose workdays are spent in the ankle-deep mud of a cyclocross pit instead of the back seat of a team car, the story is entirely different. No other cycling discipline relies so heavily on the skill and stamina of its mechanics, nor thrusts them so directly and routinely into the heart of the competition. In 'cross, crucial bike changes come not once in a career but every eight minutes—every four if conditions are right.

"You only hear about the mechanics on the road when something goes wrong," says

Daimeon Shanks, a former WorldTour wrench who now works for the Noosa CX team. "In cyclocross, having a good mechanic, or at least a competent one, is instrumental in your success. Even if nothing goes wrong, you still need a good mechanic to do the exchanges, the prep, and the washes. It's very mechanic-intensive that way."

Some of that flows from the volume of equipment involved, the precision with which it must be tuned, and the degree to which it is abused over the course of a race day. A single professional rider might have six bikes at an event, all of which need to be prepared identically, with gearing, tire, and wheel selections to match the day's course. And those tires—so many tires—must be glued to stay on the rim at impossibly low pressures, which in turn must be precisely adjusted to evolving course conditions and replicated across bikes.

"I think in some ways it's a much higher stress environment in cyclocross," says three-time U.S. national champion Jeremy Powers (Rapha-Focus), who for years split time between road racing and cyclocross before committing fully to the dirt. "Everything from the bike changes, to the bike being in the right gear, to the tire pressure being set properly, to the bikes

being matched identically in fit and position and feel in the brakes.

"I'd say the cyclocross mechanic is very..." He pauses before carefully finishing the thought: "Accountable."

Beyond the equipment responsibilities, the direct involvement in the race action elevates the role of 'cross mechanics, rendering them more active participant than safety net. Rather than simply cleaning and tuning bikes after the race, they must—in a matter of minutes—wash, lube, and check bikes; hand them off at race speed; and retrieve a used bike for the process to begin again.

The cost of failure can be enormous. In cyclocross, there is no caravan for shelter, no teammates to help, no five-hour days of racing to level the effects of a mechanical. Time to recover from mistakes is scarce. Miscommunications and missteps in the pit can and do cost wins. A dropped chain or clumsy exchange can neutralize even the most dazzling fitness.

"In cyclocross, it all happens very fast, and you don't have that opportunity to get a second shot at it," Powers says. "You need to nail it in one hit. It needs to be ready to go. So there's quite a bit more pressure on the mechanic and

the rider to have that relationship and to trust each other. I'd say that's the key word in this."

Where do riders find such trusted partners? In Europe, family members have often stepped into the mechanic's role, starting as supportive parents in the junior ranks and staying on into the elite level. In the pits of the World Cup and Superprestige, it is relatives, not elite mechanics, caring for the coveted equipment of riders like Sven Nys and Marianne Vos.

Those days could be numbered, though. New technologies like hydraulic disc brakes and electronic shifting are adding a degree of complexity that might be incompatible with the family tradition.

"The Belgians, for instance, are really good at cleaning the bikes and taking care of their kid, but I've seen a lot of mechanics just gloss over stuff in Europe," says Stu Thorne, team manager and chief mechanic at Cannondale-Cyclocrossworld.com. "I think it's because, basically, they're not really mechanics. They're just helping out, and they've been thrown into a situation where their son or daughter is really good and has come up through the sport. I think it's a great thing in many ways. But, ultimately, I've seen a few riders have problems as a result."

Stateside, most rider-wrench partnerships are built not on blood ties, but on a combination of mechanical skill and personal compatibility. Unlike on a road team, where the presence of dozens of riders, multiple mechanics, sport directors, bus drivers, and soigneurs can help smooth out incompatibilities between individual staff members, the far smaller scale of even a large 'cross team puts riders and staff in close quarters. Compatibility counts.

"It's half professionalism and half friendship," Shanks says. "I've worked with riders before on the road that I just did not care for. On the road, you're a professional, and you do the job, and it's your ass if you don't. In cyclocross, I can't say I've ever worked with a rider who wasn't also a friend."

The relationship between 'cross rider and mechanic extends beyond maintenance and bike exchanges to include consultation on equipment selection and bike setup, not to mention traveling companionship and emotional support. It is so important that, when Jeremy Powers left Cannondale-Cyclocrossworld.com for Rapha-Focus in 2011, he made sure his contract gave him the power to choose his own mechanic. There was only one man he wanted for the job: Tom Hopper. Powers knew the veteran wrench by his reputation in the tight-knit 'cross community. Hopper had already spent time abroad on the WorldTour with Slipstream and worked the pits for Danny Summerhill. Powers and Hopper are also the same age and, more importantly, share the same detail-oriented working style.

"When I reached out to Tom, he was on a very short list—a list of one—of people who I wanted

to have working with me," Powers says. "I have to travel with Tom, I have to be with him, I have to communicate with him. I'm as much picking him for his ability to work on my machines as I am for his personality and who he is as a person."

That's not to say there are no family relationships in the U.S. cyclocross pits; they're just typically ties forged by choice rather than DNA. Dusty LaBarr mans the pit for his wife, three-time U.S. Gran Prix of Cyclocross series winner Georgia Gould, while 11-time U.S. national champion and World Cup winner Katie Compton trusts her bikes to husband Mark Legg-Compton.

The strength of a rider-mechanic partnership pays off not just in smoothly functioning bicycles and flawless exchanges in the heat of a race, but in the confidence and focus that stem from knowing everything is as it should be.

"There's so much mental game going on already that when you're rolling up to the line, if you're wondering or thinking about your equipment problems, that's just taking away from your race," Powers says. "If you're thinking about your tires [rolling off the rims] or any of this other stuff, it's just taking watts right off the top. You can't have that."

If life as a cyclocross wrench comes with more involvement, stress, and accountability in creating a race-winning day, then when it all comes together, the payoff is correspondingly more rewarding. The wins and breakthrough performances feel more immediate, more personal. So do the losses.

"If somebody wins [on the road], you definitely feel a part of that, but you're sharing it with a ton of other people," Shanks says. "With cyclocross, if you're doing exchanges with one rider through the whole race and they have a great race, it's basically you and him or you and her. You're instrumental in that."

"When a rider's having a bad day, conversely, it's a lot more stressful that way. You feel like you're letting them down, or if something does happen, it's a lot easier to take it personally. It's a double-edged sword that way."

As the 2015-2016 cyclocross season enters the darkest days of winter, when the temperatures will drop, the rains will come, and the mud will be the deepest, that sword will swing both ways for riders and mechanics. And whether it's a parent or a pro wrench in the pits, countless races will hang on the fast wash, the perfect exchange, and the relationships that make them possible.

"I've told Tom many times that I hope he finishes my career with me. I hope we have that relationship," Powers says. "I'd have a beer with Tom any day of the week, and just hang and not talk about bikes because we get on well. And that's a huge part of it."

Ryan Newill has contributed to Velo since 1999. Follow him on Twitter @SC_Cycling.

WINNING

ON THE RISE

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'CROSS CRUSADERS

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PHIL 2.0

VeloNews columnist Phil Gaimon graduates, for the second time, to the big leagues, rejoining Cannondale-Garmin for 2016

VOS AIN'T BOSS

The seven-time world champ is missing 'cross season due to an overuse injury



TEAM COLOMBIA

South America's only Pro Continental team folds

MATHIEU VAN DER POEL

The Dutch phenom starts the 'cross season on the back foot after a knee injury derails his early season



LOSING

Gifts for Cyclists

(IT'S OKAY. WE KNOW YOU'RE SHOPPING FOR YOURSELF.)

BY DAN CAVALLARI AND KRISTEN LEGAN | PHOTOS BY BRAD KAMINSKI

A SIGN OF MATURITY: when you can actually appreciate a gift of socks. A sign of lingering immaturity: when those socks, and all the other gifts people see fit to give you, have a theme—the Packers, Star Wars, unicorns.

What, then, of cyclists, for whom the silhouette of a wheel, a piece of recycled bike chain, or the word “Eddy” adds immediate value, regardless of the product? Are we adults? Delayed adolescents?

We don't care. Because bike stuff!

So on behalf of all the cyclists in your life, please feel free to choose from the products on the following pages when shopping for us this holiday season. We promise we'll like it. Even if it's socks. (Especially if those socks are draped over something shiny and carbon.)



FABRIC CHAMBER MULTI-TOOL, \$60

fabric.cc

Fabric's entry into the multi-tool market is a compact, 162-gram device with a ratcheting head and 13 bit choices that can be positioned at different lengths for access into hard-to-reach places. The sleek caddy makes sure it won't stab your hydration bladder.

THE NEW

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The finest materials.

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 **VOLER**
PREMIUM CYCLING APPAREL

MADE  HERE

Gifts for Cyclists

RAPHA WOMEN'S JEANS, \$220

rapha.cc

Rapha's cycling-friendly denim offers a stylish fit and cotton-nylon construction. Commute or head out on the town in these skinny-cut, mid-rise jeans.

PEDAL PUSHERS TEE SHIRT, \$24

pedalpushersclub.com

Funny bike T-shirts. That is all.

RAPHA STRIPED COLLAR, \$50; HEADBAND, \$30

rapha.cc

The craze for stripes in cycling design has made its way to Rapha's collar and headband. Both are made from Merino wool to keep you dry and warm.

SYKES MAPLEXO RECYCLED SKATEBOARD WOOD FENDERS, \$200

sykeswoodfenders.com

These fenders are a gorgeous way to keep road spray off your clothes. The fact that the colored veneers used to create them come from recycled skateboards makes them that much cooler.

CINELLI CALEIDO RIBBON BAR TAPE, \$30

cinelli.it

The perforated windows of this synthetic leather tape reveal a kaleidoscope of colors that catch the eye, while cork beneath damps road vibrations.





**ORTLIEB COMMUTER
DAYPACK URBAN
LINE, \$180**

ortlieb.com

The large main compartment easily fits spare clothes for sudden weather changes, and the padded laptop sleeve protects computers from dings. A roll-top closure and vents in the back panel keep you and your gear dry, while the easy-access outer pocket keeps vitals close at hand.

**CONATION
COLLECTIVE PLAID
WESTERN SHIRT,
\$160**

conationcollective.com

This lightweight, packable, American-made shirt is cut slim to avoid flapping on the ride. It's a cliché to say a jersey works on the trail and in the bar. But if drinking post-ride beers—and looking good while doing it—makes us cliché, so be it.

**LULULEMON
OUTERBLAZER
JACKET, \$298**

lululemon.com

Biking to your meeting is awesome. Sitting in a meeting and looking like you biked there? Not so much. The Outerblazer assembles water-resistant, two-way-stretch panels of softshell fabric in an office-worthy piece. Zippered side vents help fight sweat when you're running late.

**PATAGONIA
PERFORMANCE
STRAIGHT FIT
JEANS, \$119**

patagonia.com

These organic cotton/polyester blend pants stretch for comfortable pedaling. Coolmax in the fabric provides moisture management, and a waterproof DWR coating means they're ready for nearly all commuting conditions.

**WALZ 3-PANEL
WOOL CAP, \$35**

walzcaps.com

Few garments are more evocative of the cycling aesthetic than the short-brimmed cap. Walz does it right with its wool piece, with a moisture-wicking liner for three-season comfort. An extra \$5 gets you custom embroidery.

**SPURCYCLE BELL,
\$40**

spurcycle.com

Bells aren't glamorous. Or they weren't. Spurcycle's offering changes that with a beautiful design and long-lasting tone that is both loud and somehow meditative. You will sit there ringing it over and over again. There's no avoiding it.

**EFFETTO MARIPOSA
GIUSTAFORZA II
2-16 PRO TORQUE
WRENCH, \$250**

effettomariposa.eu/en
With its red anodized finish and all-metal build, this torque wrench will bring style to your workbench for years. The torque range of 2Nm to 16Nm will cover most of your needs for working on carbon components. And though you won't want to hide it, it comes in a convenient roll-up pouch with a 15-bit set.

**POWERTAP P1
PEDALS, \$1,200**

powertap.com
The thrill of trying out a high-tech gift usually dies around page 47 of the manual. Not so with the P1 pedals, which easily pair with common head units without calibration, and offer data from both legs.

**GOPRO HERO4
SESSION, \$300**

gopro.com
GoPro's smallest camera packs plenty of punch, with 1080p60 video, 8 megapixel photos, and single-button controls for on-trail simplicity. It's waterproof, so go play in the mud.

**K-EDGE MOUNTS,
\$25-60**

acecosportgroup.com
K-Edge's CNC-machined mounts lock things down with a Kung Fu grip. They come in various head configurations and a range of colors, making them both functional and decorative.

**GARMIN EDGE 520,
\$300**

garmin.com
The Edge 520 has a dedicated start/stop button, lap button, and scroll buttons for easier menu navigation, as well as a full-color screen that's larger than its predecessor. Pair the Edge 520 with your ANT+-compatible trainer during the winter months and sync it with your Bluetooth-compatible phone for live tracking and alerts. The computer comes with a three-month trial of Strava Premium, so you can compete with the best times using Strava Live Segments.

**WORLD BICYCLE
RELIEF**

worldbicyclerelief.org
Give the gift of freedom and mobility with a donation to World Bicycle Relief. Your contribution will help get bicycles into the hands of people in rural Africa and open up opportunities for education, jobs, and access to healthcare.



DESIGNED FOR YOUR JOURNEY

The Critérium du Dauphiné is considered by many to be one of the best indicators of Tour de France success. Raced across many of the same roads it is a test not only for riders but also the equipment. Victory here can be a stepping stone to glory in July. The Cofidis Pro Cycling Team will be conquering those roads aboard the Kenda Kountach Endurance and Kriterium Endurance tires. Dual layer puncture protection and race tuned rubber compounds take the fear of the away, leaving the rest up to you . . .

CRITÉRIUM DU DAUPHINÉ, STAGE 2

COFIDIS PROFESSIONAL CYCLING TEAM

NACER BOUHANNI

KendaTire.com

KENDA

Gifts for Cyclists

SOCKS, SOCKS

Just a decade ago, cycling purists were protesting the move toward black socks. And now? There's no easier way to add style to your ride than wrapping your ankles with chevron stripes, ideally executed in contrasting colors. We've found the six-inch cuff to be just the right billboard for your fashion statement. (Oh, and, you know, look for Lycra-nylon compression blends and wicking knits and all that stuff.)

PANACHE,
\$15-\$20
panachecyclewear.com

**HANDLEBAR
MUSTACHE,** \$15
hbstache.com

MAD ALCHEMY, \$14
madalchemy.com

THE ATHLETIC,
\$12-\$25
theathleticcommunity.com



DON'T REPLICATE INERTIA. CREATE IT.



Boasting the heaviest flywheels in their respective categories, KICKR and KICKR SNAP use inertia to create the same experience you feel when cranking up and down the open road. Exploiting the laws of physics provides the smoothest, most realistic feel of any indoor training experience. This is the stuff no other trainer can replicate. #flywheelsmatter



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KICKR^{POWER}
TRAINER
Wheel-Off Smart Bike Trainer



KICKR^{SNAP}
Wheel-On Smart Bike Trainer

wahoo
FITNESS

Gifts for Cyclists





BIANCHI SPECIALISSIMA, \$12,500

bianchiusa.com

The Specialissima is the pinnacle of gifts for that special someone. This 14-pound beauty is hand-painted in Italy and made to race. Countervail carbon layup technology stifles chatter for a smooth ride. The company's Tavolozza program offers custom paint and graphics options, so you can make this bike your very own.

RAPHA BREVET LONG-SLEEVE JERSEY, \$210

rapha.cc

A blend of Merino wool and polyester, the Brevet jersey is made for crisp, cool weather. Reflective stripes on the chest, arm, and rear panel take care of visibility. Stylish and safe.

BONTRAGER CLASSIQUE SHOES, \$270

bontrager.com

Lace-ups are everywhere now, and the Classics show why they've caught on, with throwback styling wrapped around Bontrager's best shoe technology, from its carbon sole to ergonomic last. A snap closure keeps laces tidy.

BONTRAGER CLASSIQUE THERMAL CYCLING CAP, \$50

bontrager.com

The Classique combines a Merino outer layer for warmth with a polyester inner layer for a snug, comfortable fit. Simple stripes add style.

OAKLEY PRIZM ROAD JAWBREAKER, \$220

oakley.com

Maybe they're not as cool as 1980's-era Oakley Eyeshades. But the Jawbreaker merges that faceplate styling with modern touches like ventilation, a sleeker profile, and swappable lenses.

VELOCIO WOMEN'S RECON WOOL JERSEY, \$219; SUPERFLY BIBS, \$229

velocio.cc

Velocio's Superfly bib shorts sport an unobtrusive zipper in the rear for easy bathroom breaks. The long-sleeved jersey includes three standard-sized back pockets big enough for spare clothes or ride snacks.

SPECIALIZED WOMEN'S S-WORKS 6 SHOES, \$400

specialized.com

Specialized packs the stiffest, lightest race-shoe technology in a women's-specific fit, then wraps it in a classy white-and-gray motif. Two Boa dials ensure a snug fit and easy adjustment.

KINDHUMAN LEATHER GLOVES, \$40

kindhuman.cc

Lightly padded in the palm and wrapped in soft, supple leather, Kindhuman's gloves combine style and function. The perforated, open-back construction keeps things cool, while the leather breaks in for a custom-like fit.



Gifts for Cyclists

ENVE CARBON ROAD HUBS, \$1,350

enve.com

Enve's Carbon Road Hubs don't look like much, and they're not—just 232 grams between them. They take advantage of a continuous carbon fiber layup to deliver strength without heft. Enve says the molded spoke holes are superior to drilled holes, as drilling can weaken the flange. DT Swiss ratchet-drive internals provide immediate engagement.



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Unlimited routes



3D Real Weather



Velodrome events



Leagues and Groups



Multi-player

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**3 MONTHS
PREMIUM
\$0.99
INSTEAD OF
\$45**

SHOULDER TO SHOULDER: BICYCLE RACING IN THE AGE OF ANQUETIL, \$17

velopress.com

Showcasing the rise of a generation of cycling superstars, *Shoulder to Shoulder* explores the peak years of Jacques Anquetil's career with a restored collection of rare photographs.

Miir Growler, \$55

miir.com

Miir's vacuum-insulated growler makes it easy to pedal a favorite beer home from the brewpub. Bonus: Every purchase of a 64-ounce stainless-steel piece helps provide clean water to a person in need for an entire year. The included code helps you track progress.

GROWLER GRABBER, \$40

growlergrabber.com

The oversized Growler Grabber cage mounts easily to a bike's water bottle bosses, and rubber gaskets protect glass growlers.

DOMA COFFEE, \$15 PER 12-OUNCE PACKAGE

domacoffee.com

It's theoretically possible to ride bikes without drinking coffee first. But why risk it? This Idaho-based crew's Whiskey Barrel-Aged Coffee beans are indeed aged in whiskey barrels, for an extra flavor kick.

RIP VAN WAFELS, \$25 PER CASE (16 WAFFLES)

ripvanwafels.com

With real ingredients like coconut, dark chocolate, and sea salt, Rip van Wafels puts an American spin on a Belgian classic.

STANLEY FLASK, \$25

stanley-pmi.com

This stainless-steel flask is leak-proof so you stay dry, and the wide mouth makes for easy filling—and emptying.

THE HANDMADE CYCLIST MONUMENTS PRINTS, \$47 PER PRINT

thehandmadecyclist.com

Paying homage to cycling's monuments—Milano-Sanremo, Paris-Roubaix, Tour of Flanders, Liège-Bastogne-Liège, and Tour of Lombardy.

UNTAPPED MAPLE SYRUP, \$36 FOR A BOX OF 20

untapped.co

Yup, it's all-natural maple syrup from Vermont, conveniently stored in a gel packet. Good on waffles? Sure. But this is for mid-ride delivery.



WARMTH & VISIBILITY

WITH RFLX™ REFLECTIVE.

PACTIMO

ALPINE THERMAL RFLX™ JERSEY

This extremely versatile jersey featuring Ardente winter fabric can be worn alone in cool weather or under a jacket for freezing temperatures. The soft, brushed interior insulates against the cold while transferring sweat away from your body as your core temperature rises during exertion.

But it's the reflectivity of the RFLX shoulder panel and sleeve bands that will really blow your mind. They literally "explode" when illuminated by car headlights.

Now you can have unparalleled performance and safety all in one package. Pair with RFLX Thermal Bibs for the ultimate in winter warmth and visibility.



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2015 PHOTOS OF THE YEAR

CYCLING IS A SPORT WITHOUT PAUSE, except when the tumultuous energy, protracted agony, or ephemeral glory of a race is preserved in a photograph. We get to stare at and scrutinize these defining moments because of a troop of talented and tireless photographers scattered around the world, dangling from motorbikes amid the action, weathering the same storms as the riders. From the hundreds of thousands of frames they captured during the 2015 season, we have chosen a tiny fraction as our favorites of the year.



METRONOME

Bradley Wiggins sets a new UCI Hour Record of 54.526 kilometers at Lee Valley Velopark in London, England, on June 7.

PHOTO BY BRYN LENNON/
GETTY IMAGES

Canon 1Dx; 70-200mm
f/2.8 lens; 1/1600 sec. at
f/2.8; ISO 1250



BOY KING

Mathieu van der Poel (BKCP-Powerplus) powers to victory in the Superprestige Hoogstraten in Belgium on February 8, freshly adorned in the rainbow stripes of world champion—a title he took at the age of 20, one week earlier in Tabor, Czech Republic.

PHOTO BY COR VOS

Canon 1Dx; lens data unavailable; 1/500 sec. at f/8; ISO 1600

SHATTERED

Relentless winds splinter the peloton into echelons during stage 1 of the Tour of Qatar on February 8.

PHOTO BY BRYN LENNON/
GETTY IMAGES

Canon 1Dx; 70-200mm
f/2.8 lens; 1/2000 sec. at
f/4.5; ISO 200

REDEMPTION

Peter Sagan (Tinkoff-Saxo) breaks his winless streak with a convincing victory in stage 6 of Tirreno-Adriatico on March 16.

PHOTO BY JIM FRYER/
BRAKETHROUGH MEDIA

Canon 1Dx; 300mm f/2.8
lens; 1/1000 sec. at f/3.2;
ISO 1000

FRYER: "This was supposed to be a recovery day after the previous stage, which finished on a mountaintop in blizzard conditions. But it was not to be, as endless rain and temperatures hovering just above freezing broke down the riders and media all day long. What made this image special was the vindication Sagan achieved with this victory. His expression and exuberance could not be held back."



SNOW DAY

Nairo Quintana (Movistar) battles through spring snows on his way to victory in Tirreno-Adriatico's stage 5 to Monte Terminillo on March 15.

PHOTO BY IRI GRECO/
BRAKETHROUGH MEDIA

Canon 1Dx; 16-35mm f/2.8
lens; 1/800 sec. at f/2.8;
ISO 1000

GRECO: "As sports photographers, we relish foul weather, for the emotional drama and visceral texture it can produce. But the viewer, and sometimes even other photographers, can overlook what it took to capture that perfect moment of suffering: rain-soaked limbs, frozen fingers, wind-burnt cheeks, icy sleet splashing around the riders as they climb through their misery."



BY THE HORNS

Zdenek Stybar (Etixx-Quick-Step) attacks the narrow climb leading to Siena's Piazza del Campo on his way to victory at Strade Bianche on March 7.

**PHOTO BY JOOLZE DYMOND/
BRAKETHROUGH MEDIA**

Nikon D4; 70-200mm f/2.8
lens; 1/640 sec. at f/6.3;
ISO 1250

DYMOND: "After leapfrogging the race all day, I was headed back to the finish in Siena to shoot the final climb when my car suffered a tire puncture. There was no spare. Google Maps reckoned it would take me an hour to walk. Then I realized I might have passed a park-and-ride a mile back. I set off in hopes of catching a bus and, luckily, caught one fairly quickly, straight to the center of Siena. I found my spot with just 20 minutes to spare."



BLOWN AWAY

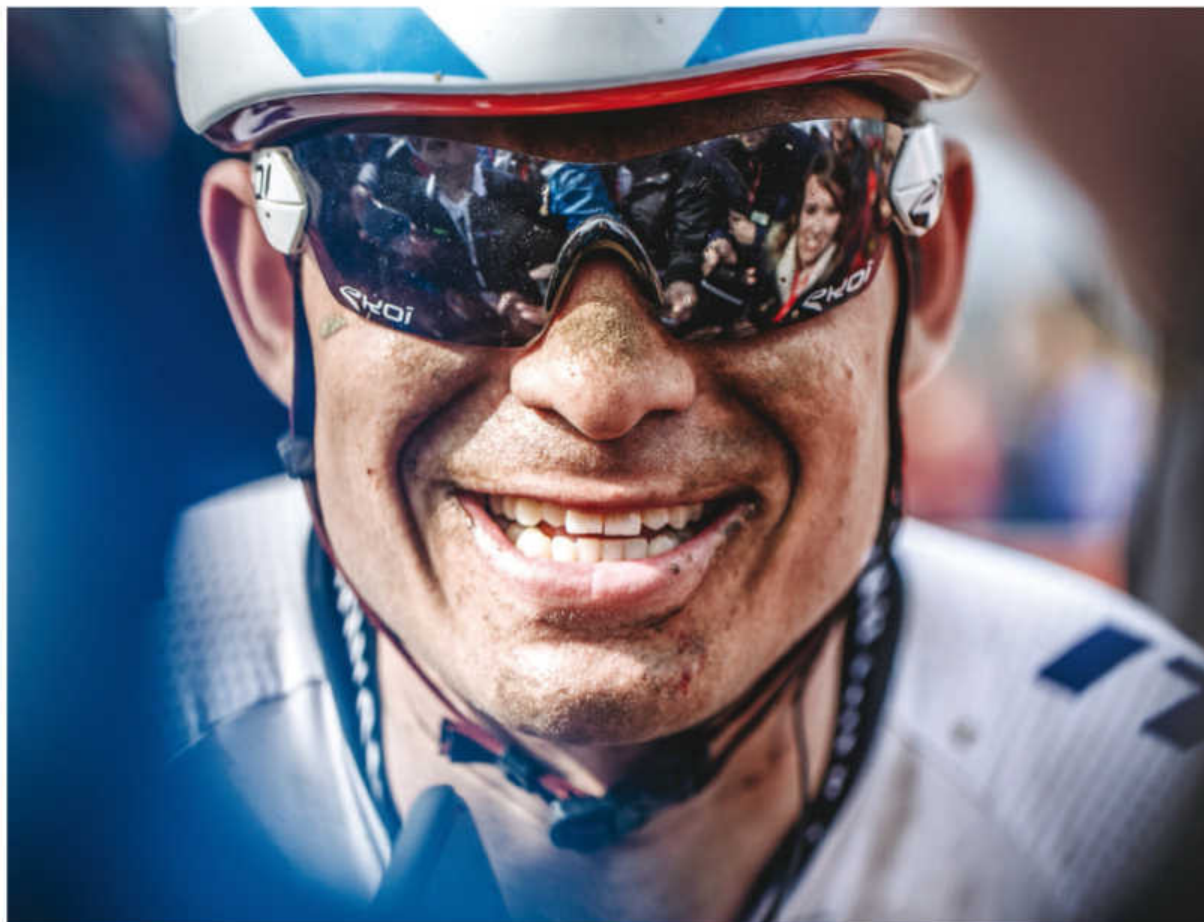
Luca Paolini (Katusha) en route to winning a brutal Gent-Wevelgem on March 29.

**PHOTO BY JIM FRYER/
BRAKETHROUGH MEDIA**

Canon 1Dx; 16-35mm f/2.8
lens; 1/500 sec. at f/2.8;
ISO 400

FRYER: "The 2015 Gent-Wevelgem will go down as one of the worst days I've ever had in cycling—unimaginable conditions that included freezing rain and, without a doubt, the worst wind I've ever experienced as a photographer or former racer. I lost a camera due to the rain only 30 kilometers into the race. It was truly a brutal day, but even more impressive was the determination I saw and captured in Luca Paolini."





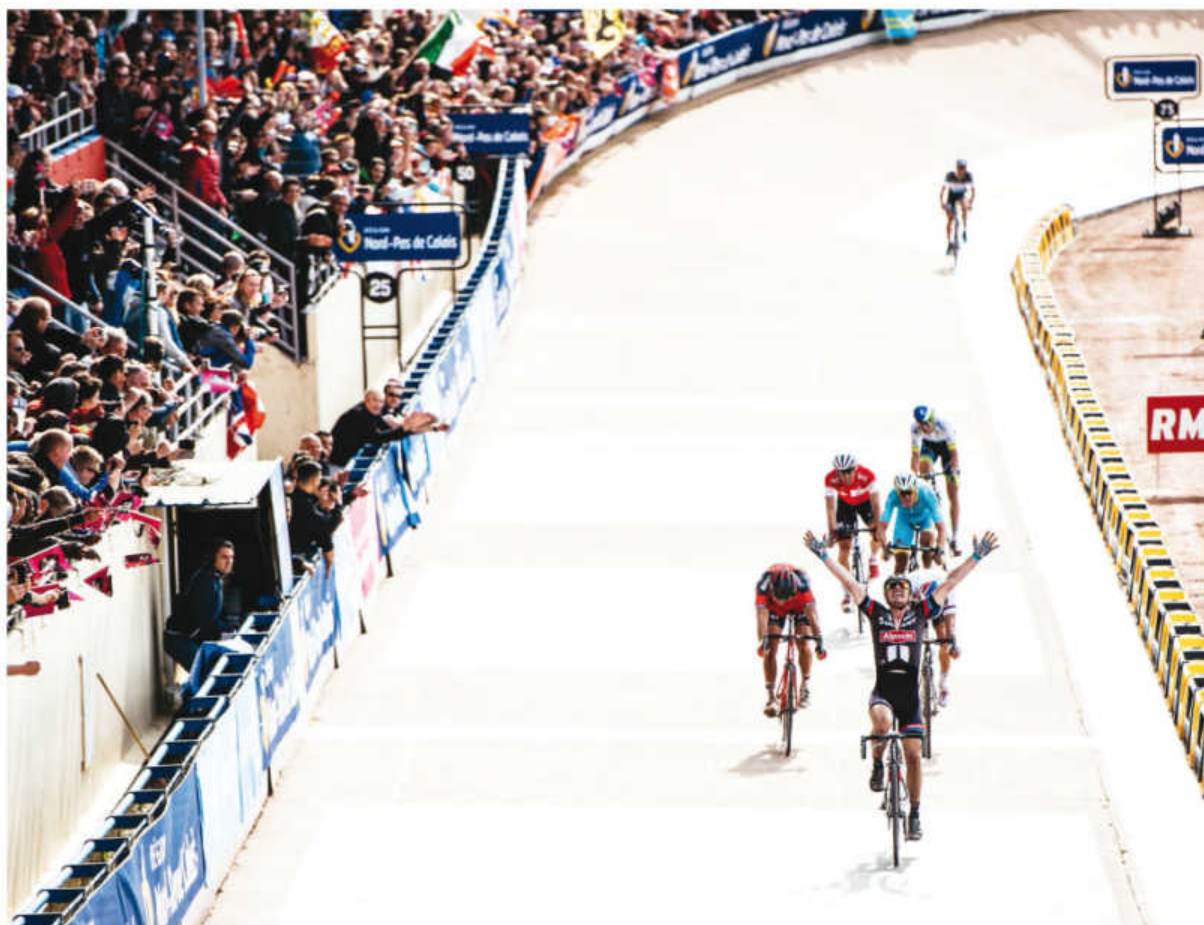
KING OF THE CLASSICS

Alexander Kristoff (Katusha) at Paris-Roubaix, April 12. It was one of the few spring classics he didn't win in 2015, a season that included victories in all three road stages at the Three Days of De Panne (Bradley Wiggins nipped him in the TT), the Tour of Flanders, and Scheldeprijs.

**PHOTO BY IRI GRECO/
BRAKETHROUGH MEDIA**

Canon 1Dx; 100mm f/2.8 lens; 1/1000 sec. at f/3.2; ISO 320

GRECO: "The aftermath of Paris-Roubaix is one big media scrum, as riders collect themselves, recover, and brace for journalists' questions. Often, there are looks of disappointment or just plain relief. But among the sea of faces in the Roubaix velodrome, I saw this one beaming. There is no other word for it. Alexander took every question with a smile, and it was incredibly infectious."



ALL OR NOTHING

John Degenkolb (Giant-Alpecin) wins Paris-Roubaix after a decisive attack. "I wasn't afraid to fail," he said. It was the German's second monument victory in as many months, coming on the heels of his win at Milano-Sanremo.

**PHOTO BY GRUBER
IMAGES**

Nikon D810; 70-200mm f/2.8 lens; 1/2000 sec. at f/5.0; ISO 320



TOOLS OF THE TRADE

The hands of a Paris-Roubaix finisher show the abuse of having survived a round of L'Enfer du Nord.

PHOTO BY IRI GRECO/
BRAKETHROUGH MEDIA

Canon 1Dx, 100mm f/2.8
lens: 1/1000 sec. at f/3.2;
ISO 160

GRECO: "Most people would say bike racing is all about the legs. That might be true. But there is a world of stories that come from the hands. For photographers, Roubaix is a complex visual story of history, preparation, suffering, and triumph. Any rider that reaches the velodrome has a story to tell, and the hands allude to the conditions, the parcours, the tireless attention to detail in preparing the body and mind, and the final moment of completion."

BELISSIMA

A strung-out peloton navigates the dizzying heights of the Ligurian Riviera on stage 4 of the Giro d'Italia, May 12.

PHOTO BY SONOKO TANAKA/
BRACKETTHROUGH MEDIA

Nikon D4s; 70-200mm f/2.8
lens; 1/1250 sec. at f/7.1;
ISO 640

TANAKA: "I had never been to the Cinque Terre before, but I was thinking I'd love to capture this beautiful place. I found a narrow set of steps leading into a vineyard. I knew the peloton was coming very soon, but I kept climbing. I couldn't imagine what the view would be like, but when I got to the top, I was satisfied!"







IN A LEAGUE OF HIS OWN

Alberto Contador (Tinkoff-Saxo) had to reach deep into his reserves of talent and perseverance to take the overall victory at the Giro d'Italia, including during a rain-soaked stage 11, which finished on the Formula 1 track at Imola on May 20.

PHOTO BY COR VOS

Canon 1Dx; lens data unavailable; 1/1250 sec. at f/5.6; ISO 2500



SECOND BEST

Fabio Aru (Astana) climbs the dirt road of the Colle delle Finestre, through the throngs of tifosi on stage 20 of the Giro d'Italia on May 30. Aru may not have won the Giro, but he is quickly becoming a favorite among Italian fans, with his Vuelta a España victory in August confirming his position among the best contemporary stage racers.

PHOTO BY TIM DE WAELE

Canon 1Dx; 70-200mm f/2.8 lens; 1/1000 sec. at f/5.6; ISO 2000

DE WAELE: "The Giro d'Italia is my favorite three-week race of the year. It's always different, and you never really know who's going to win until the last day."



MAN OF THE HOUR

Bradley Wiggins sets a new UCI Hour Record of 54.526km in London's Lee Valley Velopark on June 7.

PHOTO BY BRYN LENNON/
GETTY IMAGES

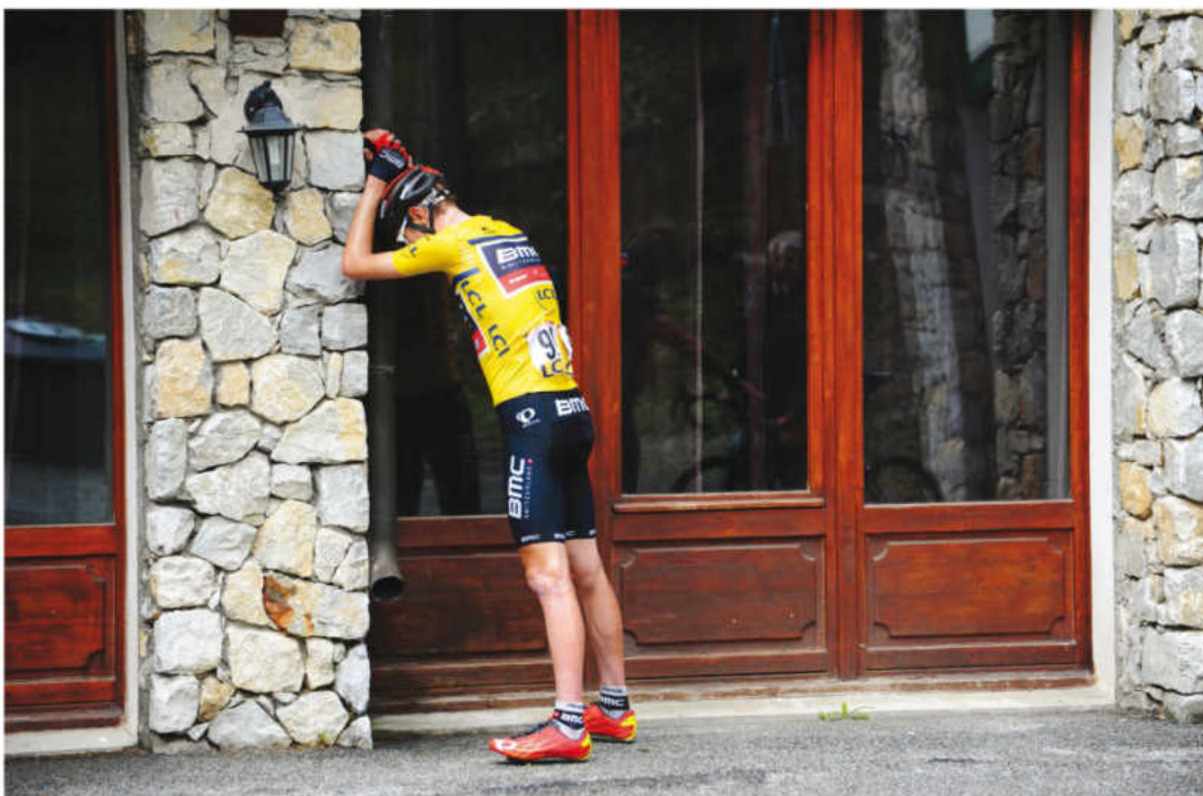
Canon 1Dx; 24-70mm f/2.8
lens; 1/20 sec. at f/9;
ISO 200

AGAINST THE WALL

Tejay van Garderen (BMC Racing), still in the leader's jersey, is devastated after losing the overall lead to Chris Froome (Team Sky) on the final stage of the Critérium du Dauphiné on June 14. The Brit had launched a solo move on the final climb to win the stage and earn a 10-second time bonus, which was just enough to give him the win.

PHOTO BY JAMES STARTT/
GETTY IMAGES

Nikon D700; no lens data;
1/1000 sec. at f/5.6; ISO
1250



SWISS CORKSCREW

The peloton crawls up the cobbled St. Gotthard Pass (2,093 meters) during stage 3 of the Tour de Suisse, June 15.

PHOTO BY TIM DE WAELE

Nikon D4s; 16mm f/2.8 lens; 1/1000 sec. at f/8; ISO 320

DE WAELE: "One of my favorite climbs in the Swiss Alps, the famous Gotthard Pass, from bottom to top, is covered by cobbles. I always wonder who put them there and how long it took—they're so perfectly shaped. A whole bunch of 180-degree turns make the view even more spectacular."







ON THE ATTACK

Evelyn Stevens and eventual winner Megan Guarnier (both Boels-Dolmans) attack Taylor Wiles (Velocio-SRAM) and Coryn Rivera (UnitedHealthcare) at the USA Cycling pro road nationals in Chattanooga, Tennessee, on May 25.

PHOTO BY CASEY B. GIBSON

Nikon D4; 70-200mm f/2.8 lens; 1/1000 sec. at f/4.5; ISO 400

GIBSON: "This was the steepest climb on the course, a short 150 meters at around 15 to 20 percent at its steepest. I asked my driver to go ahead of the leading group and get to the top of the climb early. I then had to run down to the crest of the hill to get them on the steep part. I was squeezed up against the barrier, with about a foot between the barrier and the edge of the road. This was when Evie attacked."



INTO THE MADDING CROWD

Chris Froome (Team Sky) pierces the hordes of fans gathered on the final climb to La Pierre-Saint-Martin on stage 10 of the Tour de France, July 14.

PHOTO BY LIONEL BONAVENTURE / GETTY IMAGES

Camera data unavailable



PUMPED

Thibaut Pinot (FDJ) celebrates his victory atop Alpe d'Huez on stage 20 of the Tour de France, July 25.

PHOTO BY LIONEL
BONAVENTURE/GETTY
IMAGES

Camera data unavailable

LONG AND WINDING

Chris Froome (Team Sky), wearing the race leader's yellow jersey, descends during stage 19 of the Tour de France, July 24.

PHOTO BY LIONEL
BONAVENTURE/GETTY
IMAGES

Camera data unavailable





FIVE APART

Vincenzo Nibali (Astana), Chris Froome (Team Sky), Nairo Quintana (Movistar), Alejandro Valverde (Movistar), and Alberto Contador (Tinkoff-Saxo), who would go on to be the top-five overall finishers at the Tour de France, push their way up the Col d'Allos during stage 17 on July 22.

PHOTO BY GRUBER IMAGES

Nikon D4; 14-24mm f/2.8 lens; 1/2500 sec. at f/5.0; ISO 220



MOUNT CHAOS

Chris Froome's trusted domestiques surround him as they race through the madness of Alpe d'Huez on stage 20 of the Tour de France, July 25.

PHOTO BY TIM DE WAELE

Canon 5D Mark III; 300mm f/2.8 lens; 1/5000 sec. at f/4.5; ISO 640

DE WAELE: "The famous 'Dutch Corner' on Alpe d'Huez. For some, it's a lot of fun and heaven; for others, it's hell. Great for pictures, however, and it also shows that cycling is still pretty popular and a party for all."



CALL IT A COMEBACK

Taylor Phinney (BMC Racing) snags a sprint victory on stage 1 of the USA Pro Challenge in Steamboat Springs, Colorado, on August 17. It was just his second race back after a brutal crash that had knocked him out of the sport for 15 months.

PHOTO BY DOUG PENSINGER/
GETTY IMAGES

Canon 1Dx; 600mm f/4
lens; 1/2500 sec. at f/5.0;
ISO 400

PENSINGER: "As the peloton sped into the final meters, the din of the crowd was competing with Dave Towle and Brad Sohner announcing the race. I managed to decipher that Phinney was leading the peloton to the line. I assumed he was providing a lead out for a teammate. I aimed my camera at the group charging to the finish and focused on the red and black of BMC at the front. As he posted up to win, I was ecstatic to discover that it was Taylor raising his arms to the sky."



GRAND CHAMPION

Pauline Ferrand-Prévot rides to victory in the women's mountain bike world championship on September 5, in La Massana, Andorra. The win meant that she held the road, cyclocross, and mountain bike world titles simultaneously, the first person in history to do so.

PHOTO BY DAVID RAMOS/GETTY IMAGES

Nikon D4s; lens data unavailable; 1/4 sec. at f/13; ISO 50



BOGGED DOWN

The peloton makes its way over the mud-soaked roads in stage 5 of the Tour of Alberta, September 6.

PHOTO BY JONATHAN DEVICH/GETTY IMAGES

Canon 1D Mark IV; 70-200mm f/2.8 lens; 1/800 sec. at f/5.0; ISO 800

DEVICH: "This was one of the more memorable and most miserable days of my career. After spending hours on the back of the motorcycle in the freezing cold and driving rain, we hit this section of dirt road. It was highly anticipated because we all knew it was coming and would be a mess. With our motorbike slipping all over the place, I finally found a spot I liked and waited for the peloton to come through. When they passed by, I was amazed at how fast the group was still going. After they were gone, I looked down to see that I was pretty well coated with mud from all of the spray that had been kicked up."

DUST BOWL

The elite men hit the sand pit at the September 16 CrossVegas, the first stop on the UCI World Cup.

PHOTO BY WIL MATTHEWS

Canon 1Dx; 70-200mm f/2.8 lens; 1/500 sec. at f/4.5; ISO 20,000

MATTHEWS: "In 'cross photography, the first lap or two are always the best opportunity to get an overall image showing the environment and action combined. At CrossVegas, the new sand pit was, without question, the defining feature of the course. It was powdery, unlike most 'cross sand pits, and fortunately showed crowds in the background as well. At first I really wished the start of the men's race had coincided with sunset light, but the after-dark options were even better. This available-light backlit image showed more mood and atmosphere than the two-strobe options I also had and, honestly, is unlike any 'cross image I've ever made before."



MAZE RUNNERS

Frederique Robert (Wanty-Groupe Gobert) leads a group through the cornfield section of Schaal Sels, a Belgian race founded in 1921 that abandoned its traditional kermesse format in 2015 in favor of a gravel-cobble throwdown.

PHOTO BY KRISTOF RAMON

Nikon D4; 200mm f/2.8 lens; 1/3200 sec. at f/2.8; ISO 250

RAMON: "This was my weirdest race ever. Chaos erupted as soon as we hit the first gravel section as riders, cars, and motorbikes skidded from side to side. I wanted to shoot the corn section since it was such a unique location. I needed to duck into the corn every time riders passed by, because there was no room to pass. Then the UCI commissaires' car got completely stuck in the mud, so the race was stopped. Eventually, everyone crossed the finish line safely, and they knew they had experienced something special. This was a race for the history books, and the organizers confirmed that next year's edition will use the new course."







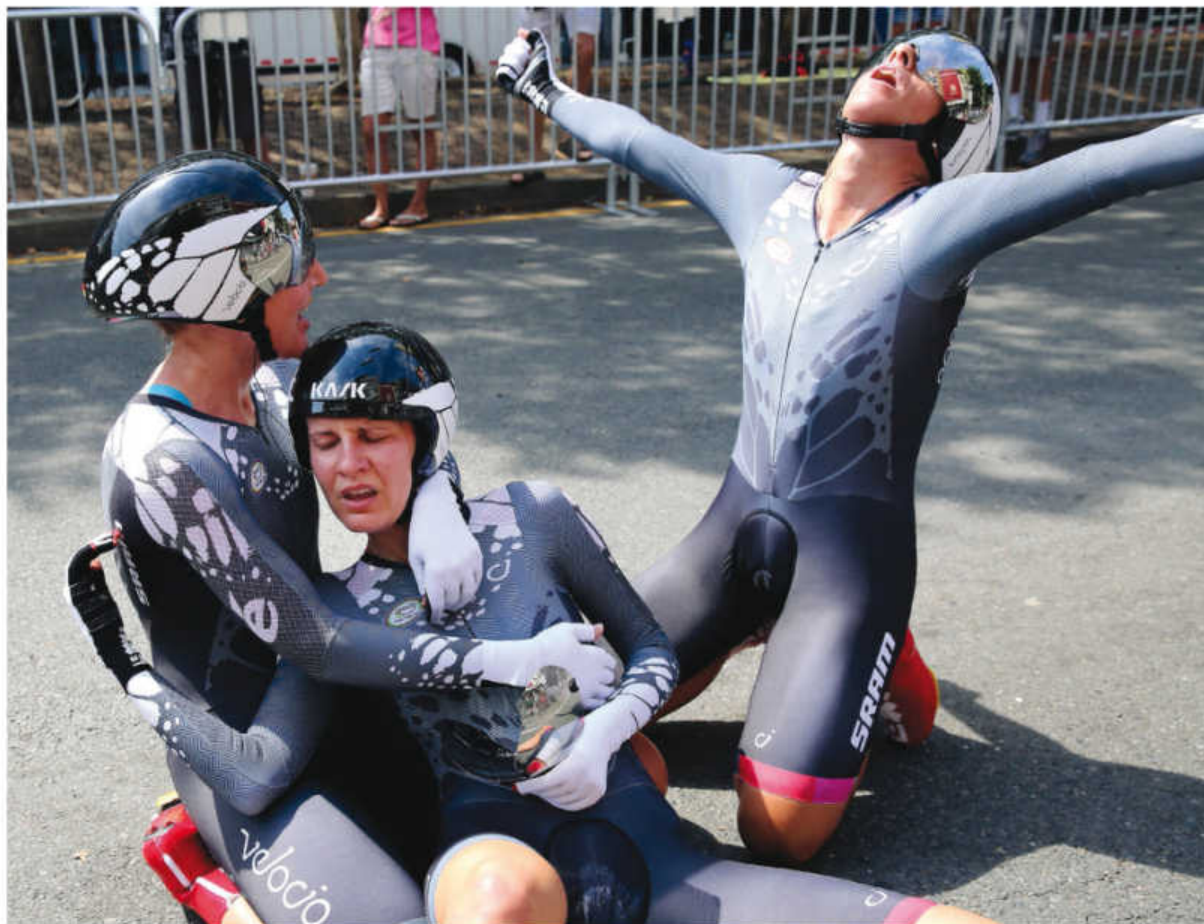
AMERICAN CLASSIC

Tiesj Benoot (Belgium) leads the peloton up the cobbled climb of Libby Hill beside frenzied fans in Richmond, Virginia, during the UCI Elite Men's World Road Championships on September 27.

PHOTO BY TIM DE WAELE

Canon 5D Mark III. 70-200mm f/2.8 lens. 1/2500 sec. at f/5.6; ISO 800

DE WAELE: "Libby Hill during the men's elite road race was, for sure, the climax of the world championships. I was surprised to see the massive crowds and fans, despite very bad weather conditions, and it was great to see they all were enjoying it in their own way. All ages, also, young and old, which is well-deserved promotion for cycling, especially in the post-Lance years. It's good to see cycling is still alive and kicking in the U.S."



BITTERSWEET REPEAT
Alena Amialiusik, Lisa Brennauer, and Trixi Worrack of Team Velocio-SRAM celebrate after winning the team time trial at the world championships on September 20.

PHOTO BY TIM DE WAELE

Canon 5D Mark III; 24-70mm f/2.8 lens; 1/640 sec. at f/5.6; ISO 400

DE WAELE: "A photo full of emotion and with a double message: Team Velocio wins the prestigious team time trial for a fourth year in a row, but the team is folding. So it was a happy and emotional ending for all."



THE LOOK
Peter Sagan checks on the progress of the charging peloton as he approaches the finish line to take victory in the world championship road race in Richmond, Virginia, on September 27.

PHOTO BY TIM DE WAELE

Nikon D4s; 400mm f/2.8 lens; 1/2500 sec. at f/2.8; ISO 500

DE WAELE: "Peter Sagan in his own style, winning worlds, leaving all the other contenders behind. I actually had predicted he would win. I think I should start putting money on those kinds of bets. It's probably a more attractive and easier way to earn money than trying to shoot the best photos."

KING NYS

Sven Nys (Crelan-AA Drink) rides beside a running Kevin Pauwels (Sunweb-Napoleon Games) at the Zonhoven Superprestige on October 25. The "Cannibal from Baal" is in his final season after a prolific career in which he has won two world titles, nine Belgian titles, more than two dozen series titles, and more than 300 races.

PHOTO BY TDWSPORT.COM

Nikon D3; 24-70mm f/2.8 lens; 1/400 sec. at f/3.5; ISO 800



RACE BIKES ARE OFTEN MEASURED IN GRAMS AND MILLIMETERS. That's why we send our test bikes to a lab for objective measurements of things like frame deflection.

But a lot of what matters can't really be objectively quantified. Sometimes the value of a bike has more to do with beauty, fun, and maybe a dose of nostalgia. When a bike measures up in both the lab and the heart, you've got something special. That's what we sought in this month's test—bikes that combine modern performance with timeless craftsmanship.

These are forever bikes, handmade metal beauties as suited to gallery walls as group rides, creations you'll want to use every day and bequeath to your kids when the time is right.

A TIMELESS TOUCH

There are bikes you want to ride and bikes you want to pass on to your kids after you've ridden them for years. These are the latter. BY DAN CAVALLARI | PHOTOGRAPHY BY BRAD KAMINSKI

COLNAGO ARABESQUE \$3,800 (frame and fork) 18.28 lbs 54 cm ★★☆☆☆

The cliché among bike builders is that you can pick two of these three characteristics in a bike frame: stiff, light, or cheap. So what of the Arabesque, a re-issue that uses the star-shaped tubing of the Colnago Master and ornate lugs of the Arabesque from the early 1980s? It's flexy, heavy, and expensive, yet it's fun to show off on group rides and worthy of hanging on a gallery wall. It also boasts a great story, especially for lovers of Italian racing history. A Colnago employee stumbled upon a box of vintage Arabesque lugs lying around the factory basement, so the company decided to use them for the new frames. When the lugs run out (Colnago won't say how many there are), the frames will no longer be made.

VALUE This is a piggy-bank plunderer, especially for a steel frame and fork. But did you see those lugs? You're paying for a bit of history here. We dressed our tester in Campy Chorus (not cheap), but true aficionados may want to deck this out in vintage Campy, if possible (even more not cheap). This is a collectors' item, and the price reflects that.

COMFORT What the Arabesque lacks in stiffness it more than makes up for in silkiness. This

bike is buttery smooth over neglected pavement. And while the steel fork may not track like carbon, it's better at soaking up chatter—the way steel should.

HANDLING The Colnago has relatively compact geometry, so the long and lanky will have to watch for toe overlap. Consider sizing up. Not surprisingly, the Arabesque squirms under heavy pedaling load. The thin, star-shaped steel tubing—from the same DT15V alloy-steel used for 1980s-era Colnagos—is great for cruising but unsteady when crushing.

ACCELERATION By now it should be clear that the Arabesque is not about stiffness. (Take a look at those VeloLab numbers.) But dinging it for that would be to miss the point. This beauty wasn't made to win races; it was made to turn heads, smooth bumps, and prompt smiles. And it does.

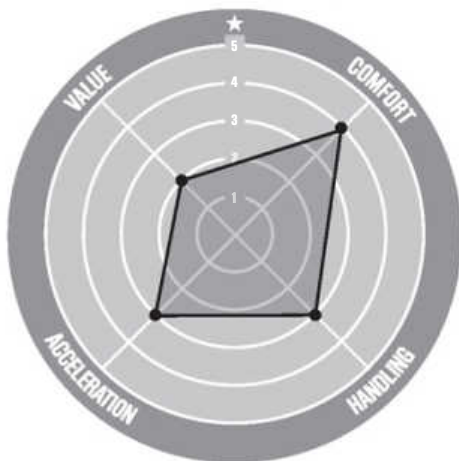


WE LIKE
Show-stopping lugs

WE DON'T LIKE
Excessive frame flex

OVERALL SCORES

TORSIONAL STIFFNESS TOTAL
(MEASURED IN MILLIMETERS) 7.06



A retro-vintage beauty

BREADWINNER LOLO \$2,350 (frame and fork) 17.92 lbs 55cm ★★★★★

When you're off the Lolo, you notice the gorgeous head badge and pinstriped paintjob. When you're on it, you just ride—ripping hard into switchbacks and rocketing out of corners. Best suited for long adventure rides—primarily because of its low bottom bracket (72mm drop for a size 55cm)—the Lolo begs to be flaunted at a gran fondo. Our test bike's Shimano Ultegra 11-speed mechanical components were a fitting choice, given the Lolo's modern ride and throw-back aesthetics. The 3T Rotundo classic-bend bar on our tester also fit with the retro vibe, though we suspect many riders would be happier on something with a shallower bend.

VALUE While not cheap, the Lolo is competitively priced for a custom frame with an Enve fork. Remember that this beauty is hand-made specifically for you, after you complete a fit process. Mass-produced bikes can match that kind of fit only by luck. And it combines ultralight Columbus Life tubes with an Enve carbon fork. Old-world style with new-world performance: That's money well spent.

COMFORT Our tester's short head tube (14.3cm on a size 55cm) allowed for an aggressive riding position, which was great for our fast, sorta friendly *VeloNews* lunch rides. But with a higher

stem and short-drop bar, the Lolo is ideal for rough roads or longer days in the saddle. It seems made for big adventures. The Lolo can easily accommodate 28mm tires, which make any ride smoother.

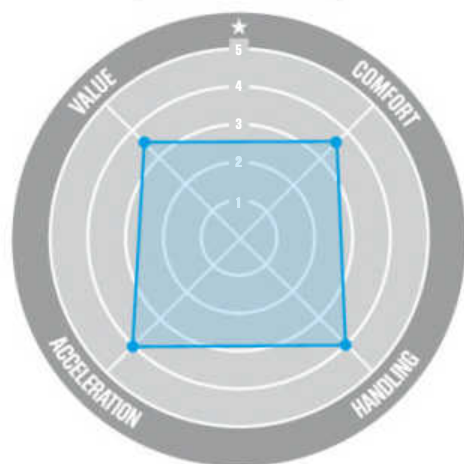
HANDLING The low bottom bracket drops the rider's center of gravity, helping the Breadwinner confidently carve through switchbacks. But the bike isn't one you can finesse. It takes a bit of muscle to throw through the corners, but it provides a stable ride.

ACCELERATION The threaded bottom bracket is a nice touch. Given the tendency of even perfectly executed press-fit setups to get finicky over time, they're probably not the best choice for a forever bike. Would bigger bearings in the BB deliver better power transfer? Sure. But we never felt slow coming out of corners on the Lolo. We'll stick with quiet, reliable outboard bearings any day.



OVERALL SCORES

TORSIONAL STIFFNESS TOTAL
(MEASURED IN MILLIMETERS) **6.12**



Best suited for long adventures

CIELO ROAD RACER \$2,495 (frame and fork) 17.62 lbs Medium ★★★★★

Carbon may be ubiquitous, but it isn't the only race-worthy material for bikes. Speed has to do not just with weight but with geometry and stiffness in all the right places. This Cielo proves that. Carefully honed Columbus tubing, with race geometry, allows this frame to transfer power almost as well as carbon and soak up chatter like, well, steel.

VALUE Yes, \$2,500 is a large investment, but for a Jay Sycip-designed steel frame with a Chris King headset and carbon Enve fork, it's not at all out of the ordinary. Of course, you're probably going to want the painted-to-match stem as well (remember, this bike is forever!), which brings the price to \$2,800. Slightly less reasonable, then, until one looks at the competition. A Speedvagen Road model, for example, costs \$1,000 more and offers roughly analogous ride quality.

COMFORT The Cielo's thick seat stays and burly 44mm head tube deliver a notably direct connection between rider and road. That's a nice way of saying the Road Racer is less comfortable than some other

steel bikes. That's the tradeoff for improved power transfer. But the Road Racer is by no means harsh. It's still more forgiving than a typical carbon race frame, particularly with a set of 25mm tires on the fat Enve rims we rode.

HANDLING The Road Racer is one of the best-handling bikes—of any frame material—to come through *VeloNews* world headquarters in quite some time. It's aggressive, with a squat head tube (129.3mm) and quick steering geometry. The chainstay length (415mm), bottom bracket drop (66mm), and head angle (73.5 degrees) combine for race-worthy agility that help this bike live up to its name.

ACCELERATION Those fat stays transfer power like superconductors, and the 44mm head tube fights torsional flex up front. The result: Stand up on the pedals and lay into the bars, and this bike takes off. A PF30 bottom bracket helps with stiffness for power transfer, but we'd still prefer a thread-in for long-term reliability.



WE LIKE

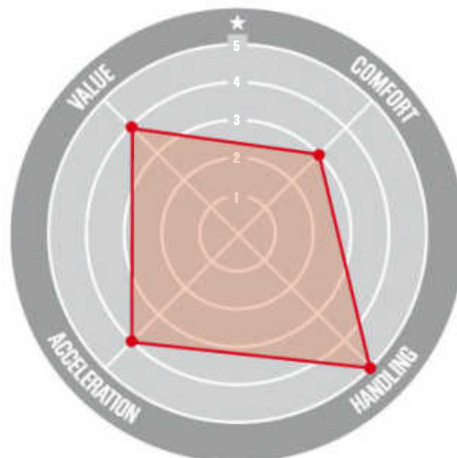
Racer geometry with classic smoothness

WE DON'T LIKE

PF30 bottom bracket

OVERALL SCORES

TORSIONAL STIFFNESS TOTAL
(MEASURED IN MILLIMETERS) **5.08**



A steel ride that redefines race-worthy

SPEEDVAGEN ROAD \$3,735 (frame, fork, seat topper) 16.82 lbs 54cm ★★★★★

With a pop-art aesthetic reminiscent of Cold War-era propaganda posters, the Speedvagen stands out from its steel brethren as soon as it's pulled from the box. But even if you rode it blindfolded (not recommended), you'd be just as impressed. The steel frame utilizes myriad tube shapes—flattened and curved seat stays, an ovalized down tube, and a tapered head tube. Those shapes aren't decorative. They're placed with intent and translate into a zesty, refined ride.

VALUE

The Speedvagen is expensive. There's no way around that. But given the craftsmanship involved, it's justifiably spendy. Still, we would probably skip the \$1,500 "surprise me" custom paint scheme and matching Silca frame pump.

COMFORT

This frame exhibits all of the zippy spring that makes steel bikes fun to ride, but none of the clunkiness of basic, straight-gauge metal tubes. Even with deep carbon rims, the Speedvagen soaks up chatter. The curved, flattened seat stays likely add some small-bump compliance that is responsible for that smooth ride.

HANDLING

The rider sits nearly dead center on the Speedvagen, which creates a balanced feel. Carving on high-speed descents is more about shifting weight than forcing things up front. It's calm, precise, and instinctive.

ACCELERATION

Enve's carbon wheels give any bike an unfair advantage. But this frame stands on its own merits, as the lab data attests. The Road is as stiff as top carbon frames. Seriously. It's the 15th-stiffest bike we've ever tested. The PF30 bottom bracket certainly helps with that. And it also lets Speedvagen internally route the rear brake cable for a clean look.

One quibble: Under heavy sprinting, we could occasionally hear the disc rotors rubbing. We would have preferred thru-axles to stiffen the interface between wheel and frame. That would complicate wheel changes, of course, but if frantic, mid-criterium pit stops are part of your routine, this is the wrong bike.

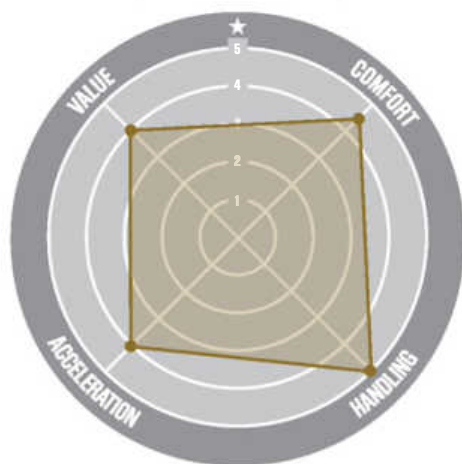


WE LIKE

Handling and ride quality

OVERALL SCORES

TORSIONAL STIFFNESS TOTAL
(MEASURED IN MILLIMETERS) **4.98**

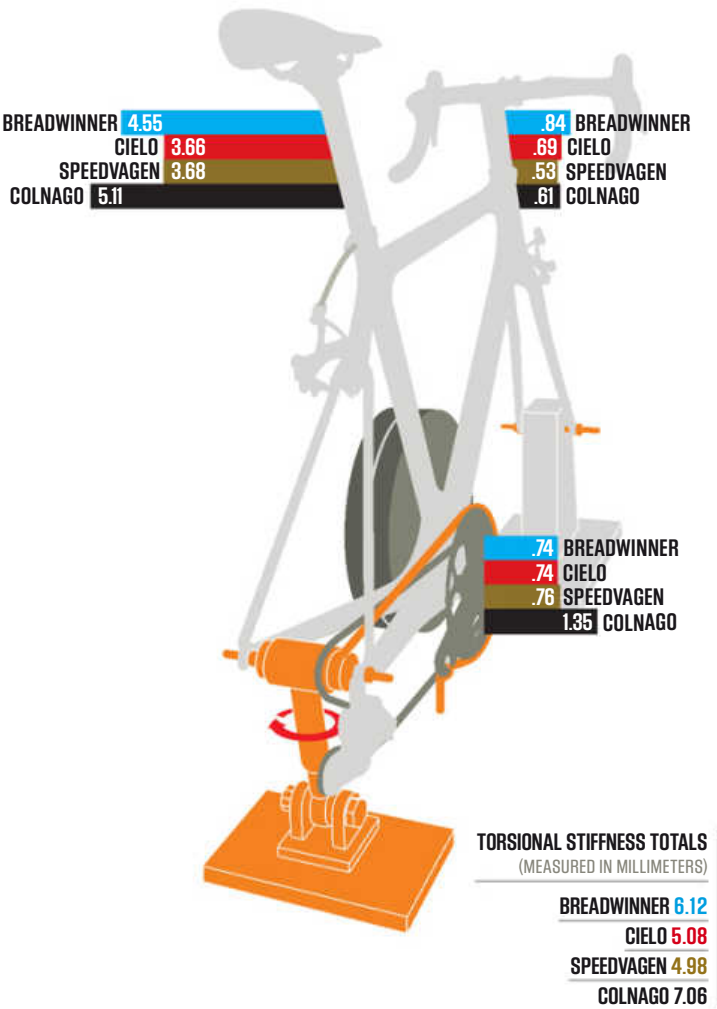


WE DON'T LIKE

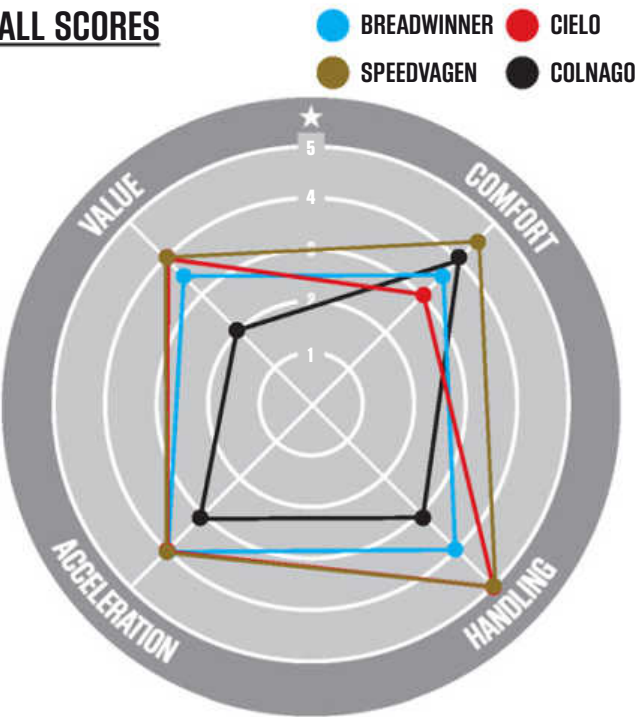
Lack of thru-axles

A metal race bike that rivals carbon thoroughbreds

TORSIONAL STIFFNESS TEST



OVERALL SCORES

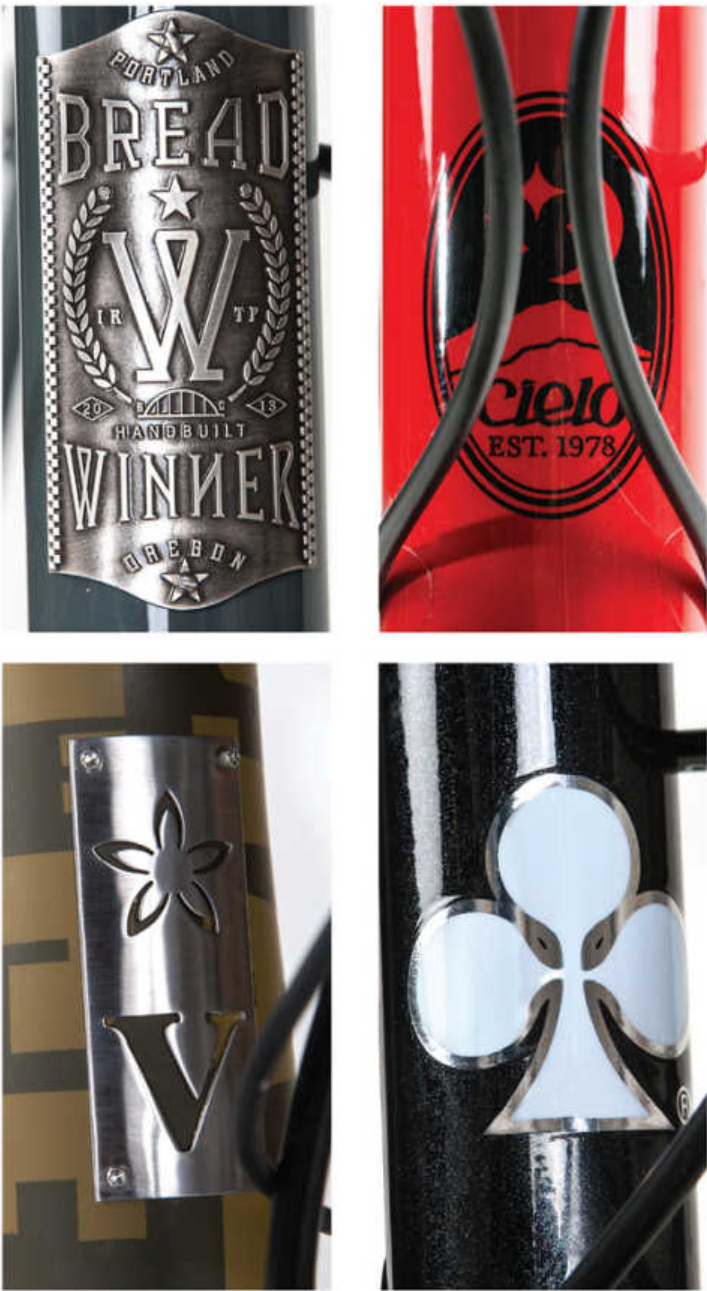


THE BOTTOM LINE

All four bikes in this test are worthy of heirloom status, yet the lab data reveal two clear winners. The Speedvagen—rivaling the stiffness of the best carbon bikes in the world—sits atop the podium, with the Cielo a very close second. Both bikes showcase steel’s true potential when it’s tailored for real, everyday riding. The stiffness of these frames is a testament to the workmanship that goes into creating today’s high-end metal frames, but never detracts from the characteristic compliance we love about steel. They’re comparable bikes, but details like the Speedvagen’s sculpted seatstays propel it to the top spot.

Aesthetically, the Breadwinner and Colnago are polar opposites: The Arabesque’s visual elegance catches the eye while the Lolo’s quiet beauty captivates the heart. The former earns a place on the mantel because of its ornate lugs and the story that comes with them, while the latter demands time on the road for its comfortable, all-day ride quality.

Kristen Legan, Caley Fretz, and Spencer Powlison contributed to this review.



UNFAMILIAR GAINS

Cross-training will help you combat the effects of cycling-specific maladies like bone density loss and muscular imbalances **By Trevor Connor**



THE NOVELTY EFFECT
Svein Tuft (above) likes to ski, hike, and trail run during his off-season; Alberto Contador has climbed Mount Kilimanjaro and learned to surf as part of team training camps.

A 2008 STUDY FROM THE UNIVERSITY of Colorado that followed 14 competitive cyclists for a year to measure bone density found that the racers lost, on average, one percent of their bone mineral density over the course of a single season. Extrapolate that over a lifetime of cycling and things get scary.

According to Andy Pruitt, who literally wrote the book on cycling health (*Andy Pruitt's Complete Medical Guide for Cyclists*), bone density issues, along with muscle imbalances, are two of several bike-related maladies cyclists face if they don't take preventative steps.

"As they age, I can pick them out of a crowd," Pruitt says, referring to the pronounced outward spinal curvature, or kyphosis, that many cyclists suffer from. Pruitt, who helped found the Boulder Center for Sports Medicine (now the University of Colorado Sports Medicine and Performance Center), and developed Specialized's Body Geometry system, says cyclists' posture on the bike is not a healthy one.

Fortunately, there are ways to address these issues. They tend to involve cross-training. Most of us understand that at some point we need to temporarily hang up the bike in favor of running shoes and free weights. Those 14 cyclists in the 2008 study, for example, recovered some of their bone loss with off-season weight-bearing activities.

The trick is to remember that the terms "off-season" and "cross-training" mean two different things. According to Pruitt, getting off the bike in autumn is purely about mental freshness. Cross-training is a longer-term strategy that many of us don't keep up.

Canadian pro Svein Tuft (Orica-GreenEdge), 38, says he's always trying to push the younger riders to do other things. He points out how many are running on reserves by July because of the heavy WorldTour calendar. "If you're strong and robust, you have a long and consistent season," he says.

Setting the example himself, he says he



raced the 2015 Tour de France just two months after breaking his sternum and wrist. He attributes this quick recovery to year-round off-the-bike work, which includes skiing, hiking, and weights. "It just kept me physically in good shape, so when I was able to get back on the bike, it just came back right away," Tuft says.

With such clear benefits coming from cross-training, why do so many cyclists limit themselves to two wheels once the base season ramps up? The answer may have to do with two of the driving principles of physiology: specificity and overload.

Specificity pertains to the fact that gains are very particular. Do nothing but bicep curls, and you'll get python-sized arms. Meanwhile, the

COURTESY SVEIN TUFT; TIM DE WAELE; TDSPORT.COM

rest of your body will be about as strong as the python's hapless lunch. Specificity applies to muscles, movements, energy systems, position, and even time of day. Cycling, with its focus on the cardiovascular system and certain leg muscles—to the almost complete exclusion of anything else—is highly specific.

Overload deals with physical improvement through training loads that go beyond what the body can normally handle. Generally, athletes do this with volume and/or intensity. To be a high-level cyclist, it takes a lot of both, and they have to be applied in very cycling-specific ways. This all creates a strong argument to spend every minute on the bike.


Ironically, applying the overload principle to work done off the bike may counter the notion that riding is all you need. Pruitt points to concealed gains that come from cross-training through a third, often forgotten, method to overload our systems: novelty.

By mixing in semi-specific off-the-bike work, we can produce a beneficial overload without the risk of injury and burnout-producing stress that can come with too much volume and intensity. “We have multiple energy delivery systems that need to be trained,” Pruitt says. “By getting off the bike, we can stimulate new pathways, new ways to deliver energy, and new ways to recruit amongst the three different muscle types.”

Pruitt cites Nordic skiing as an example of a semi-specific sport. It's similar enough to riding that cyclists will feel comfortable trying it, yet different enough to work common cycling weaknesses such as balance and gluteus medius strength.

In a 2013 review from the journal *Sports Medicine*, Vladimir Issurin, one of the pioneers of periodized training, found that athletes who focused only on sport-specific overloads quickly reached their biological limits, causing joint injury and burnout. Many of these issues were prevented with cross-training. He gave the example of Anatoliy Bondarchuk, one of the most successful coaches in Olympic history, who used the novelty effect of semi-specific cross-training to produce all three medalists in the hammer throw at two consecutive Olympics.

Beyond the proven physiological benefits, another huge benefit of cross-training may be its ability to prevent the mental burnout seen by Issurin which, in cyclists, is associated with spending too much time in the saddle.

The bottom line is simple: The off-season is a short period of time that you should use to refresh your mind. Physical cross-training is a task best employed year-round to help you avoid the ailments that come with doing nothing but cycling. 



Win by being novel

Pruitt and Tuft have vastly different backgrounds, yet have virtually the same recommendations when it comes to reaping the benefits of cross-training.

HOP, SKIP, AND SKI

The best sports for cross-training are semi-specific to cycling and address the typical weaknesses of cyclists such as balance, proprioception, and core and gluteus medius strength, Pruitt says. Since cycling is such a quad-dominant sport that can lead to muscle imbalance and injury, Pruitt recommends activities such as Nordic skiing, hiking, weight work, and trail running that work the muscles neglected during cycling—the gluteus medius, vastus medialis, and core. He recommends using trekking poles while hiking to engage the neglected upper body. Tuft will use all of these in his cross-training sessions, and won't get on the bike until January.

LOAD UP

Sports that have an impact on our joints, such as running or hiking, help rebuild bones. Cycling's low-impact nature is one reason it contributes to osteoporosis. It's crucial for cyclists to do load-bearing work throughout the year.

BE ECCENTRIC

Cycling involves only concentric contractions. Yet multiple studies, including a well-cited review in the *Journal of Physiology*, have shown that eccentric contractions can help prevent muscle injury through mechanisms that still aren't

fully understood. Activities like skiing and running incorporate much needed eccentric work.

OFF BALANCE

Cyclists think they have great balance, but according to Pruitt the centrifugal force of the wheels and their gyroscopic effect do much of the work. Sports like trail running and skiing, which engage proprioceptors in the muscles that sense movement and balance, are vital for developing an awareness of the relative position of neighboring parts of the body and the strength needed in certain movements. That, in turn, leads to better bike-handling skills.

HIT YOUR LUNGS

Central conditioning (our body's ability to deliver oxygen) isn't very sport-specific. Activities like running and Nordic skiing can help keep the cardiovascular system strong. Conversely, swimming has almost no transfer effect to cycling because of its upper body focus, according to Issurin.

HIT THE WEIGHTS

The weight room can be a dull place. But Pruitt says the ability to plan and control your workouts there makes these sessions invaluable. Furthermore, Issurin found that weights not only work sport-specific muscles but

also improve their ability to use oxygen.

Unless you're a track racer, Pruitt recommends staying away from the shoulder-weighted squat rack, box jumps, or other plyometric exercises, due to the risk of injury. He prefers the hip sled and leg-press machine and recommends using a weight equal to your body plus bike. Start at two sets of one to two minutes. Then increase time depending on what you can handle.

A weight routine should include some balance and proprioception work as well as lateral movements. Pruitt recommends the bosu ball and balance boards.


SCHEDULE IT

Even top pros like Tuft struggle to find time during the season for cross-training. To stay healthy and strong, Pruitt recommends just 15 minutes of work four to six times per week focused on off-the-bike balance and back, core, and glute strength. Do it after your ride but before you change. “If you add it to your training hours, you are more likely to do it,” Pruitt says.


DON'T FORGET THE BIKE

Pruitt likes to get on the trainer after skiing or lifting weights. “In my mind, I am taking three hours of skiing and then telling my legs it was three hours of cycling,” he says. “I need to tidy up my day on the bike.”

MADDUX
Hand-built wheels


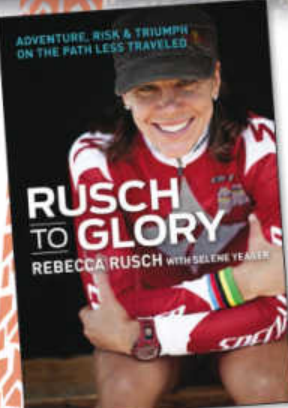


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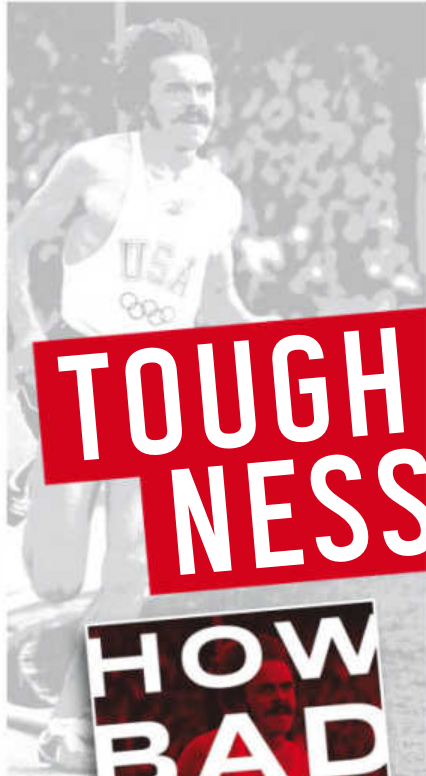
QUEEN OF PAIN

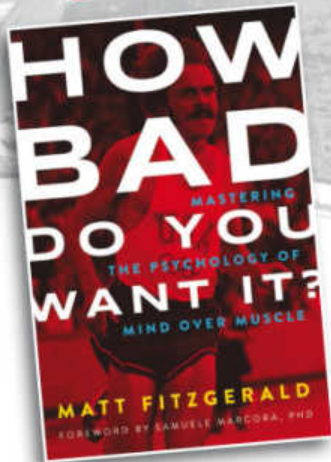
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Freeze frame

AS THE CHILD OF SEMI-PROFESSIONAL photographers, I've been in my share of snapshots. From birthdays and little league games to graduations and family gatherings, my parents have captured my life—and now those of my children—with the same relentless paparazzi approach generally reserved for A-list stars and the British royal family. While I've always tried to be a good sport about it, I have to admit that I understand why Alec Baldwin struggles to suppress the urge to coldcock anyone holding a Nikon.

The thing with photos, of course, is that most of them turn out to be nothing special. It takes a mixture of skill, luck, and timing to get just the right shot. Of the thousands of photos that chronicle my life, there's a good chunk I'd pay money never to see again: pictures in which my eyes are closed, my hair is hilariously unkempt, and my ex-girlfriends are glaring disapprovingly—often all in the same photo. But there is also a handful of shots that evoke such powerful memories of the moment of their capture that they have become personally iconic.

There's me at age three retrieving tortillas from the refrigerator. There's me and my mullet hanging out with Eddie Van Halen. There's me teaching school. And there's me at my wedding and at the births of my children. These

aren't photos that anthropologists of the future will look back on to unlock the secrets of an ancient American culture. But they'd tell you most everything you need to know about me. Photographs are special that way.

As a fan of pro cycling, I've come to regard the sport's best photographers with as much esteem as I do its great champions. Because of the distances covered, cycling isn't an ideal spectator sport. And while I enjoy watching televised race coverage, I rarely find myself returning to the tape. What I do return to are my favorite photographs. It's a list that grows longer every year. In fact, a pair of recent shots stands out as favorites.

The first is an incredible shot by Kristof Ramon, taken at the 2013 Milano-Sanremo. The event was marred by horrid spring weather, with heavy snowfall forcing race officials to halt the race and transfer riders by bus to safer environs, chopping 52 kilometers from the route. I could write all day about the epic weather, but nothing could do justice to the conditions in the way Ramon's image of Greg Henderson does. In stark black and white, it captures the road-weary Kiwi as he prepares to board his Lotto-Belisol team bus, his face gaunt and creased, glasses and helmet coated in frost, an icicle dangling just above his nose.

The other is a devastating photograph of Tom Danielson captured by Laurent Cipriani at the 2012 Tour de France. The victim of a late-stage pile-up, Danielson sits by the roadside near the stage 6 finish in Metz, his forehead pressed into his knees, his kit in tatters, his skin half gone, and his eyes clenched shut. More than just about any other I've seen, Cipriani's photo captures the pain and loss the sport can inflict.

Don't get me wrong; I love a good victory salute as much as the next guy. But when it comes to imagery, it's not photos of Mark Cavendish holding his hands aloft that stir me to ride. Maybe that's because I'll likely never experience the joy of a sprint win, or share the Manxman's otherworldly talent. But somehow photos like those of Ramon and Cipriani light a fire within me. Each reveals something I connect with far more powerfully than victory: the dedication and sacrifice of the pro peloton, and the athletes' sheer will to keep going even in the face of incredible adversity.

Cycling's best photographs are windows into the soul of our sport—and a reflection of all who choose to ride. 

Dan Wuori was the most photographed child in 1977. Follow him on Twitter at @dwwuori.

ILLUSTRATION BY DAVID BRINTON

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